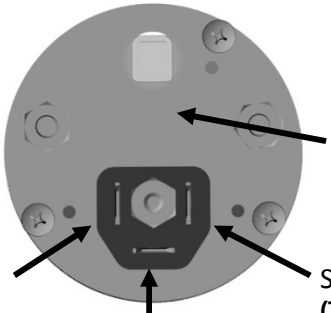
MCL-3000 SERIES FUEL LEVEL
PART# MCL-3K-FUL

Thank you for purchasing the Dakota Digital MCL-3K-FUL gauge for your Harley Davidson Touring bike. This gauge is designed to be a direct, plug in replacement for all touring models from 1996 and up. This is part of a six gauge package for touring models so you can add additional gauges as you choose.

You must select the correct fuel level sensor in setup or the gauge will not read correctly. **The stock fuel sender for 1996-2007 models is the "10" setting, and "33" for 2008 and up.**



INSTALLATION

First read and familiarize yourself with all of the components and this manual. The first step is to remove the seat and disconnect the negative side of the battery, as with any electronic install. Once the battery is disconnected you are ready to start.

REMOVAL OF FACTORY GAUGES

Remove the outer fairing; this will vary from model to model, please follow the service manual to expose the wiring and gauges. Don't be alarmed by the amount of wires behind the fairing, this is a direct plug in kit and these detailed instructions will guide you through it.

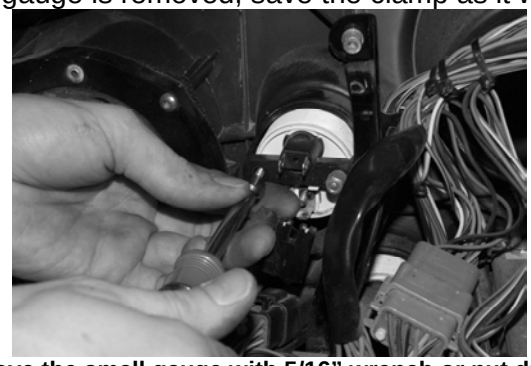
Pic of street glide with outer fairing removed

Pic of road glide with outer fairing removed

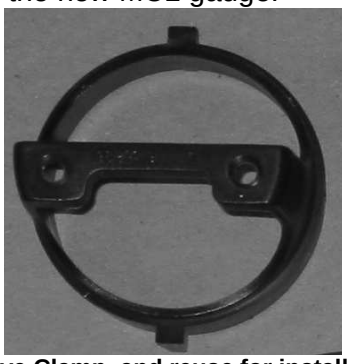
All of the small gauges, fuel, volts, oil, and air temp have two plugs. One is for illumination the other is for the gauge power, ground, and sensor signal. The illumination harness, two pins (orange and black wires), and will not be reused and can hang freely inside the fairing with the bulb removed, or can be secured to the other gauge wires to clean things up. The three pin connector from the stock gauge will be used to connect the new Dakota Digital MCL-3k gauge. Unplug connectors at the back of the gauge, then remove the two 5/16" nuts holding the clamps onto each small gauge and remove the gauges.

******New nuts for the small gauges are included in the hardware pack DO NOT reuse the stock nuts for the new gauges; they are not the same thread.***

Once the gauge is removed, save the clamp as it will be reused with the new MCL gauge.



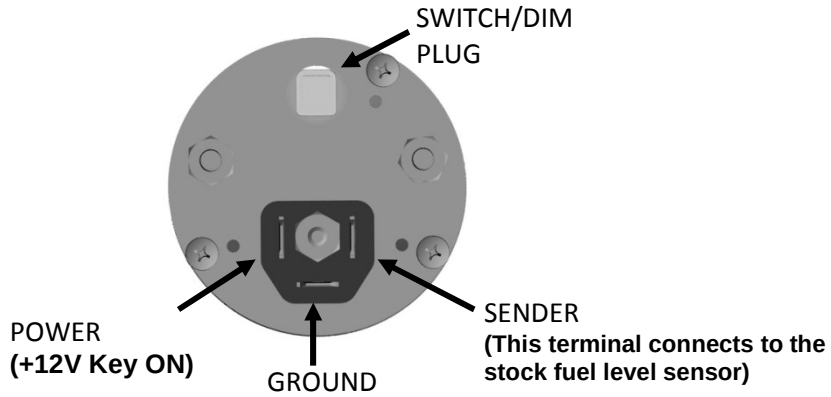
Remove the small gauge with 5/16" wrench or nut driver



Save Clamp, and reuse for install

INSTALLATION OF NEW MCL-3K-FUL GAUGE

Install the new gauge back into the fairing using the original clamp, along with the supplied nuts. Be sure the alignment tab on the clamp lines up with the notches in the fairing when tightening the clamp back up.



WIRING

The three tab connecter toward the bottom of the back side of the MCL-3K gauge is designed to plug directly into the stock harness. This will provide the gauge power, ground, and sensor connection. If the wiring harness plug is not available, wire according to the drawing on next page. Standard ¼" female spade connectors can be used to make a connection to the gauge.

The second connector toward the top of the back side of the gauge is where the supplied Switch/Dim harness connects. Both inputs are active high and are "triggered" when there is +12V on either wire.

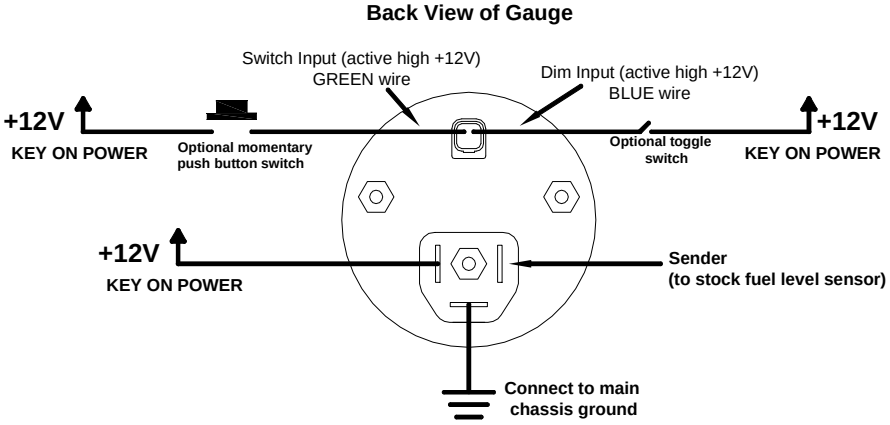
BLUE Wire (Dim Input)

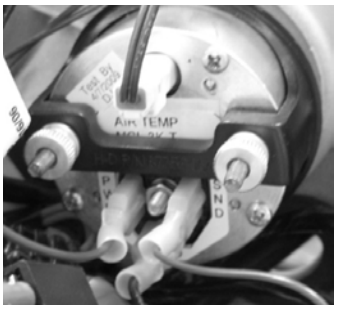
The BLUE wire is used for optional night time dimming function. When this wire is held high, +12V, the gauge will dim to about ½ brightness.

GREEN Wire (Switch Input)

The GREEN wire is used for a switch input for entering setup. This wire can be wired to a momentary push button switch and the other side of the switch to +12V. The wire can also be stripped back and touched to +12V to enter setup and then taped off once complete.

(Wiring diagram on next page)

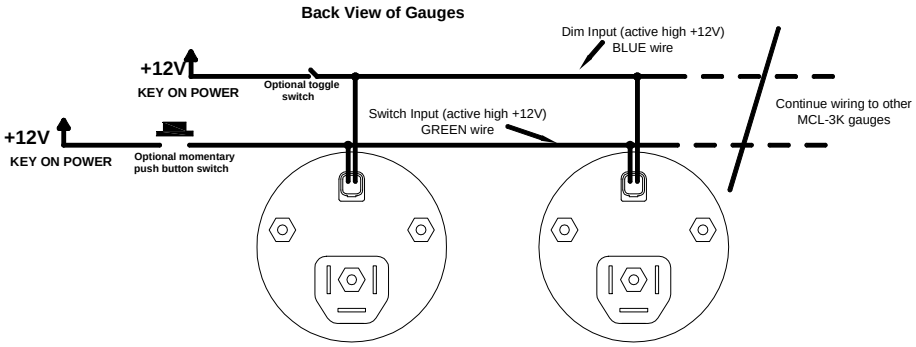




Connection shown with optional spade terminals

If you are installing multiple MCL-3K gauges you can tie the GREEN wires together and then to one switch. The same is true for the BLUE wire, wire all of them to one switch.

If you have a MCL-3K Tachometer, it will actually serve as the dimming "switch". The BLUE wire on any of the MCL-3K Tachs will provide a +12V output for the dimming function. The gauge has a light sensor behind the lens and when the ambient light is dim or low it will "turn on" the output and supply +12V to the BLUE wire. You will not need to wire in a toggle switch if you have an MCL-3K tachometer and choose to wire it this way.



GAUGE SETUP

The fuel gauge can be set to read two stock Harley sensor curves, see setup procedure below for correct sender selection. There is also a non-adjustable warning feature that will flash the gauge at any reading below 10% as a low fuel warning indicator. You may also choose to select a custom fuel curve, where the gauge will "learn" your sensor as you add fuel.

The GREEN switch input wire, in the two pin connector, is used to enter setup. If you are only installing one or a couple Dakota Digital MCL-3K gauges set up may seem a little strange since they are designed to work as a set, however you'll simply cycle through a few screens to get to the desired gauge. The table below shows what will be on the gauge with each button press, or tapping the GREEN wire high +12V.

	Speed	Tach	Oil psi	Oil temp	Fuel	Volt
1st	- 1 -	CL	- 1 -	- 1 -	- 1 -	- 1 -
2nd	SPd	- 2 -	- 2 -	- 2 -	- 2 -	- 2 -
3rd	- 3 -	tCH	- 3 -	- 3 -	- 3 -	- 3 -
4th	- 4 -	- 4 -	PSI	- 4 -	- 4 -	- 4 -
5th	- 5 -	- 5 -	- 5 -	F or C	- 5 -	- 5 -
6th	- 6 -	- 6 -	- 6 -	- 6 -	FUL	- 6 -
7th	- 7 -	- 7 -	- 7 -	- 7 -	- 7 -	ULt
8th	- 8 -	- 8 -	- 8 -	- 8 -	- 8 -	- 8 -

Please note that the word “switch” in the setup instruction is in reference to the GREEN wire, you can install any momentary push button switch and use that or simply strip the wire back and hold or tap the GREEN wire to a +12V source for set up. Once setup is complete, cover the end of the GREEN wire and secure it so it cannot accidentally be shorted.

To enter setup:

- Press and hold the switch while turning the key on, the gauge should light and show “dxx” (xx is the software code and may be used for tech support).
- Release the switch and “- 1-” should be displayed. Looking at the table, on previous page, press and release the switch and scroll through until you see “FUL” on the display; this is the screen you need to get to in order to enter the fuel gauge setup.
- Press and hold switch until “Snd” is displayed, release the switch and a number should be displayed. This indicates current sender selected.
- Press and release the switch until the correct sender type is displayed. “10” for 73-10, “33” for 240-33, “CUS” for custom or “CAL” for custom sender programming. **The stock fuel sender (1996-2007) should use the “10” setting for correct readings or “33” for 2008 and up modles.** If “CAL” is not selected, press and hold until “---” is displayed. Turn the key off.
- If “CUS” is selected, and a custom fuel curve has not yet been programmed, the gauge will immediately enter the “CAL” routine.
- If “CAL” is selected, the fuel sender curve can be programmed into the gauge. Begin with an empty tank. The gauge will be showing -00 and switch to displaying the measured resistance. Press and release the switch to save the empty reading.
- The display will show -33 and then switch to displaying the measured resistance. Add enough fuel to fill the tank to 1/3. Press and release the switch to save the 1/3 reading.
- The display will show -66 and then switch to displaying the measured resistance. Add more fuel to fill the tank to 2/3. Press and release the switch to save the 2/3 reading.
- The display will show -99 and then switch to displaying the measured resistance. Add more fuel to fill the tank full. Press and release the switch to save the full reading.
- Press and hold until “don” is displayed to save the settings. The gauge will then return to normal operation.

SERVICE AND REPAIR

DAKOTA DIGITAL offers complete service and repair of its product line. In addition, technical consultation is available to help you work through any questions or problems you may be having installing one of our products. Please read through the Troubleshooting Guide. There, you will find the solution to most problems.

Should you ever need to send the unit back for repairs, please call our technical support line, (605) 332-6513, to request a Return Merchandise Authorization number. Package the product in a good quality box along with plenty of packing material. Ship the product by UPS or insured Parcel Post. Be sure to include the RMA number on the package, and include a complete description of the problem with RMA number, your full name and address (street address preferred), and a telephone number where you can be reached during the day. Any returns for warranty work must include a copy of the dated sales receipt from your place of purchase. Send no money. We will bill you after repair.

Dakota Digital 24 Month Warranty

DAKOTA DIGITAL warrants to the ORIGINAL PURCHASER of this product that should it, under normal use and condition, be proven defective in material or workmanship within 24 MONTHS FROM THE DATE OF PURCHASE, such defect(s) will be repaired or replaced at Dakota Digital’s option.

This warranty does not cover nor extend to damage to the vehicle’s systems, and does not cover removal or reinstallation of the product. This Warranty does not apply to any product or part thereof which in the opinion of the Company has been damaged through alteration, improper installation, mishandling, misuse, neglect, or accident.

This Warranty is in lieu of all other expressed warranties or liabilities. Any implied warranties, including any implied warranty of merchantability, shall be limited to the duration of this written warranty. Any action for breach of any warranty hereunder, including any implied warranty of merchantability, must be brought within a period of 24 months from date of original purchase. No person or representative is authorized to assume, for Dakota Digital, any liability other than expressed herein in connection with the sale of this product.

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